The Gas Salesman
and
Gas Service.

VOL. 5, NO. 54.]

CONTENTS.

	PAGE
The Problem of the Small Undertaking	27
Coal Merchants' Propaganda—Gas Heated Wash-Boiler	28
Jottings	29
A Popular Cooker—Small Silver—An Electricity Consumer's Experiences—Reliable Burner at Low Cost—Shopping Made Comfortable	30
An Elementary Treatise on Gas Lighting	31
Watford Peace Memorial Hospital—Boys' Hearth Coke Fire	33
B.C.G.A. Gas Salesmen's Circles—	
Southern District—London Area	34
Lancashire and Yorkshire Circles	36
Southern District—Sub-Section "A"	36
Midlands Circle	37
A Big Gas Tank	35
New Domestic Coke Boiler—Government Electricity Plans	37
New "Bungalow" Cooker in Four Sizes	38
Advertising Gas in the Far East—"Fashion" and Opportunity—Increasing Goodwill by Making Payment Easy—Three Essentials of Salesmanship	39

APPOINTMENTS & PROMOTIONS.

Gas Salesmen, Showroom Attendants, and Manufacturers' Representatives are invited to send information as to promotion or changes in appointment for publication under this heading.

NOTICES.

"The GAS SALESMAN" is published eighteen times a year; and the following are the Prices :

Annual Subscription 6s., post free, payable in advance.

Single copies (by post) 4½d.

Purchase in Bulk for Distribution among Gas Service Staffs—

100 copies of each issue, 30s, plus carriage
50 " " 16s. "
25 " " 8s. "
12 " " 4s. "

From October to the end of March, "The Gas Salesman" is published twice a month; from April to September, on the last Wednesday in each month.

The Editor reserves to himself the right to delete from, or modify any, communications submitted—particularly those dealing with matters of a purely personal nature.

All communications should be addressed to

WALTER KING, Ltd.,
"The Gas Salesman,"
11, Bolt Court, Fleet Street,
London, E.C. 4.

Telephone Number: CENTRAL 6055.
Telegrams: "GASKING FLEET, LONDON."

EDITORIAL.

The Problem of the Small Undertaking.

THE problem of the small gas undertaking is always with us. We realize that were it not for such concerns many an area of the country would, at certain parts of the day, be benighted, and would not at any time have that important essential to a civilized life—labour-saving gas for heating and cooking. For this we have to thank the enterprise of long ago which gave many rural areas something which added to their amenities. But there are not a few of these small undertakings which have not kept themselves abreast of modern efficiency in respect of public service; and yet there is no reason why they should not do so. And, be it remembered, good service does much to compensate for the higher charge for gas which is inseparable from the limitation of opportunities that prevails in such districts compared with the denser populated areas elsewhere. It is wonderful what attentive service can do in producing for the consumers the efficiency which yields economy in the use of gas, and which goes far to mollify their feelings over the fact that they have to pay more for gas than consumers in other areas—perhaps not far away.

We believe that where inefficiency of service obtains, it is due to men and not to conditions; and this we say emphatically because we know there are good examples of small undertakings where the most enlightened service obtains, and where in consequence there is satisfaction, and not continual grumbling over the fate which has committed the supply of gas to men whose service is the best testimony to their incompetence. In the "GAS JOURNAL" for May 20 last year (p. 530), there was an excellent account of the results which were being secured by the Minehead Gas Company through the pursuit of a policy (including maintenance of consumers' appliances) which would do credit to many concerns of much greater magnitude; and, in "THE GAS SALESMAN" for Jan. 27, we had Mr. C. E. Barnes telling us what they are successfully doing at Wimborne (with its 34·3 million c.ft. output), and how they seek to develop business by studying points of service. If companies so situated can do these things, then other undertakings in like and superior position could do the same, if the men at the top only set their minds to the adoption of a policy which would protect their business, be an incentive to its increase, and save them much opprobrium among their customers.

There is no excuse for those who administer and those who manage such undertakings continuing to neglect modern standards of gas business conduct. There is to-day a free dissemination of information as to business policy in the gas industry. What with the "B.C.G.A.," the Salesmen's Circles, and "THE GAS SALESMAN," there are ample sources of information as to what others are doing; and from them a good and appropriate selection of methods can be made by anyone of ordinary intelligence. We know that not all small undertakings have representatives they can send to the meetings of a Circle; but some of them would find it a profitable piece of enterprise if they appointed a competent young man to take charge of their district and sales work. We are certain it would pay them over and over again; and it would also pay them (if geographical situation was not a genuine deterrent) to allow such men an opportunity to mix with their fellows in the Circles who are on the sales and public service staffs of large undertakings, and who are always keen to learn what others are doing, and apply the information, if suitable, or whenever possible or serviceable, to their own work.

In some of the smaller undertakings, there is good efficiency, having regard to the size of the business, at the gas-producing end; in other cases, there is inefficiency there, with the penalties for the consumers of high prices of gas and inconstant quality and pressure, to which conditions has to be added the complete abandonment of the consumers to their own devices in the matter of utilization. All this is fatal to contentment with the service of gas. The movement at the present

day is towards the wiping-out of those sources of production in any walk of industry which are inefficient—so raising the standard of economy in the country. It is one of the aims of the Government electricity scheme to transmit electrical energy from super-stations to districts at present served by inefficient generating stations, or to supply the distributors there with current in bulk from the super-stations, and let them attend only to the trading work. Much the same thing has been suggested in connection with the gas industry—that the larger undertakings should stretch-out their mains to new territory, and particularly should seek to effect the absorption of undertakings which are inefficiently worked at the present time, or enter into business relations with them for the supply of gas in bulk, leaving them to do the work of local distribution and trading. If this policy develops, we can see vast changes taking place in country districts in the gas business. For example, a small gas undertaking relieved of the work of gas production could appoint an official trained in gas distribution and utilization, whose major work would be to develop the business, and to see that all connected appliances were maintained in a condition which would create a desire on the part of the users to retain, and not to discard, them. We see no reason why, in these days of high-pressure transmission, a change of a very beneficial kind in the public service of small gas undertakings should not come about. At any rate, these small undertakings are threatened with competition under the Government electricity scheme. It is for them to set their houses in order before it comes about; and there will not be much business for electricity in country districts where good service is rendered by the gas suppliers.

It is for the larger undertakings to turn their attention to these small gas-consuming areas, and to obtain bulk supply business (if there is not absorption), always remembering that bad experience in those areas is to the disadvantage of the whole gas industry. That point need not be laboured much, because it is almost generally realized. The effects of neglect here and there permeate to unexpected quarters, and have results of almost unhappy character. We heard of a man not long since who became "fed-up" with the little consideration and indifferent service he obtained from the gas undertaking in the country district in which he resided. That man was an influence in connection with the housing scheme in the area in which his business is situated, and that influence was exercised not to the advantage of gas. It must be remembered by the larger gas undertakings that in these days of quick transit by motor-cars the tendency is for many people of influence to get farther out into the country for residential purposes. To our mind the importance of the problem of the small gas undertaking has been considerably enlarged of late; and so much of the problem is concentrated in service.

Coal Merchants' Propaganda.

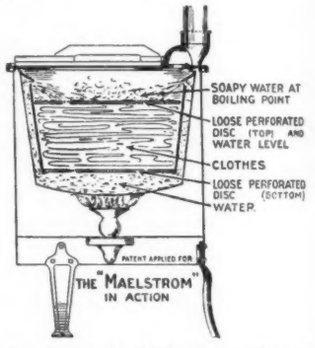
WITH the coming of spring, and a dropping-off of the demand for domestic coal, the retail merchants are intensifying their propaganda among householders. But we are confident it will be a simple thing for gas salesmen to counter the statements which are made by the coal merchants in their literature.

Before us is a prettily illustrated folding card; inside are three domestic scenes. One of them is a nursery. Regarding this, the coal merchants say that a room of this kind is ventilated in the best way by the draught of a coal fire, and that the "ever-present danger of gas makes it entirely unsuitable for a nursery." It is also alleged that for the health of children a coal fire is essential. In speaking of health, the coal merchants conveniently overlook the smoke, dust, and drudgery attaching to the coal fire. They also forget to mention the periodical visits of the chimney sweep, who is never *persona grata*. They entirely neglect to point out that successive Governments have had under consideration the question of stiffening-up legislation affecting the pollution of the atmosphere by smoke from the burning of crude coal, and that a measure dealing with this is promised by the Ministry of Health for the present session of Parliament. Secrecy is maintained by the merchants as to the generation and promotion of ill-health by the emanations into our atmosphere of domestic and industrial chimneys. They say nothing as to the clouds of smoke from such chimneys preventing the free play of the sun's rays upon humanity—in the manner so desirable for health-giving. They omit reference to the intensifying of fogs in winter by the smoke of our cities and towns, when atmospheric conditions allow it to become concentrated, instead of being dispersed by the wind. They ignore, too, the great efforts that are being made by the scientific men of the country to bring about a condition of things which would provide a sufficient supply of smokeless fuel to avoid completely the necessity for the use of coal in its raw state. They do not mention that the Miners' Federation, in their recent scheme of nationalization, provided for an extension of the coal industry so that coal could be dealt with at the pithead in a manner which would obviate the strong objection the Federation have to the consumption of raw coal. We do not think it necessary to deal in these times with such a fabrication as the coal merchants' suggestion that gas-fires are "stuffy," although we have no great objection to their describing electric radiators as "glaring." So far as gas-fires are concerned, the coal merchants are living in the past, or are grossly dishonest.

In regard to economy, it is stated on the propaganda card before us that it costs 8d. to heat an ordinary room for fifteen hours with a coal fire; a gas-fire for the same time would cost 2s. 3d.; an electric radiator for the same time would cost 8s. We are only concerned in the 8d. and the 2s. 3d. We do not know what, in the minds of the coal merchants, constitutes an "ordinary room;" but we do know that, at the prices charged for coal in and about London, it costs more than 8d. to heat a room of 14 ft. by 15 ft. for fifteen hours. The same room does not need a gas-fire burning continuously for fifteen hours; and during the time that it is actually required, the fire does not cost anything like 2s. 3d.—for the simple reason that there are no stand-by charges as in the case of a coal fire, which has to be "kept in." Electrical people must deal with their own 8s.

Gas Heated Wash-Boiler.

Popular as it already is, there is no reason why the gas heated wash-boiler should not be as universally used as the gas cooker and the gas fire; for the clothes-washing needs of the household are surely as important as the cooking of food and the heating of rooms. With gas this can be done without the trouble of lighting a fire, and without the labour of clearing away dust and ashes. This is an important point to make known to housewives, countless of whom would welcome the innovation. The gas wash-boiler saves time, labour, and space, is clean, thoroughly efficient and economical, and is fixed without the least trouble.



John Wright's "Maelstrom" is an example of a boiler which will turn the most arduous wash-day into a day of comparative ease for the housewife. Fill the boiler with water, add soap; and the moment boiling-point is reached, the imprisoned steam at the bottom of the pan forces the water up the tubes in the manner shown in the illustration. Emerging from the slotted heads of the tubes in a rapid and ample flow, the boiling water makes its way through a perforated top-plate, then through the clothes and through the lower-plate, to be forced once more into circulation through the tubes. The hot soapy water is circulated through the clothes a number of times; the flow being equivalent to 200 gallons per hour.

The outer case of the "Maelstrom" boiler is made of strong durable galvanized iron. The inner pan is of tinned copper; and a combined flue carries-off the gas and steam products. A plate, pierced with a number of holes, slides down the inside of the pan, and rests at the ends of three circulating tubes, leaving a shallow chamber between it and the bottom of the pan. Little or no attention is required after the boiler has been filled with water, the clothes put in, and the gas turned on, for the circulating process takes place automatically, once boiling-point is reached.

Literature illustrating and describing the "Maelstrom" and other gas-heated wash-boilers will be sent on application to Messrs. John Wright & Co., Essex Works, Aston, Birmingham.

Jottings.

At this month's meeting of the Southern District (London Area) Circle, the members had the privilege of being addressed by a Lady Journalist, Mrs. Robert Noble; and her remarks, which are published in other columns of this issue of the "SALESMAN" were very much to the point. First impressions, said Mrs. Noble, count for a great deal when a woman enters a showroom. If she finds the sort of room she would approve in her own home, she is likely to be favourably impressed with the apparatus she sees there. Of course, if there is a row of cookers, she can compare them one with another; but if she sees one in place as she would probably instal it in her own kitchen, she will be the better able to realize how well it will meet her requirements.

* * *

Mrs. Noble suggested that half the home troubles of women are due to defective apparatus of one kind or another. Therefore when a salesman is discussing equipment of the house with a woman, he should bring this to her mind. Then, of course, women are anxious to make their homes as beautiful and as comfortable as possible; and the salesman should stress the fact that gas appliances do enable a woman to keep her home in a much more attractive condition than would otherwise be the case.

* * *

In an article in this issue, Mr. A. V. Bishop suggests that the remarkable increase in hairdressers' establishments—due to the prevailing fashion of "bobbing" and "shingling"—should provide an additional field for gas. It is amusing to note tnat, among the hairdressing companies registered at Somerset House during 1925, is one known as Dogs' Baths and Requisites, Ltd., formed to run hairdressing saloons and toilet rooms for dogs. It is not anticipated, however, that the consumption of gas for the latter establishments will ever represent a large proportion of any gas undertaking's output.

* * *

Last month, before the Southern District (Sub-Section "A") Circle, Mr. W. L. Westbrook, who is President of the London and Southern District Junior Gas Association, read an interesting paper on "Gas Lighting." [This is published in later columns of this issue.] His Company, the North Middlesex, are supplying Sugg's "Littleton" lamps on inclusive hire maintenance terms, and fixing them free, complete with distance controller. At present they have about 200 of these lamps out on hire, over 80 of which were fitted in 1925. In several instances they have been successful in displacing electric lamps, while in many cases shopkeepers have dispensed with electric lamps in their windows, after having outside gas lamps fitted. The 6-light "Littleton" is listed to give 600 c.p., and, allowing for by-pass consumption, would account for 9000 B.Th.U. per hour, costing, at 10½d. per therm, 0·94d. To give equivalent results, allowing 0·75 watt per candle-power, electricity would have to be sold at 2·36d. per unit.

* * *

Last October, Mr. W. W. Townsend, Engineer and Manager of the Colchester Gas Company, suggested that a discount might be given for gas used for lighting purposes. Mr. Westbrook is in entire agreement with this view. He does not hold that a discount should be given for lighting only, which would involve separate lighting supplies and an extra meter, but rather that a discount should be given, under agreement, on the whole account (subject to a minimum consumption clause) where gas is used for cooking, heating, and lighting throughout.

* * *

Doubt can no longer exist regarding the benefits of some form of maintenance scheme. Many undertakings have arrived at the conclusion—and it is hoped that many more will follow suit—that to instal appliances and then leave them to their own devices, does not contribute to satisfaction in use, either from the customers' or the undertaking's point of view, and that it must ultimately react on the latter if the appliances are allowed to get into disrepair and consequent inefficiency.

* * *

In this connection the Universal Service Scheme which the Brighton and Hove General Gas Company introduced two years ago is of considerable interest. Altogether the maintenance staff consists of 55. For this staff, youths of 17 years of age are selected. They are given a three months' course of training, consisting of one month each in the burner maintenance shop, the brass shop, and the cooking and heating stove shop, at the end of which period—that is, in the thirteenth week—they are given a refresher course for the first three days in the week, followed by a practical examination in each of the subjects, and concluding with a written paper covering the whole of the ground. The youths are then districted under their foremen, and report to their particular foreman each day before proceeding to their jobs. He meets them once during the day, when any difficulties are elucidated; and, if necessary, he will accompany a lad to assist or advise in case of special need.

* * *

Since the Universal Service Scheme came into being, on Jan. 1, 1924, till Oct. 31, 1925, 688,125 burners, 28,061 cookers, 9788 fires and radiators, and 798 miscellaneous appliances were inspected; and the scheme is working most satisfactorily. Efforts like this certainly deserve every encouragement. As mentioned in Mr. Westbrook's paper to which reference has already been made, the North Middlesex Gas Company have a maintenance scheme under which labour is free, and an order or the cash obtained for any material supplied for consumers' own burners or appliances. From April, 1925, to the end of the year, 6242 burners have been overhauled, and 74 new burners and 30 new fittings supplied. No fewer than 1476 installations have been overhauled, and 1338 cookers, 473 fires, 125 geysers, 162 coppers, 21 radiators, 196 boiling rings, and 196 miscellaneous appliances have been attended to. This is the way to retain the goodwill of the consumers, the importance of which Mr. F. W. Goodenough, C.B.E., Executive Chairman of the B.C.G.A., stresses in an article which was published in the "GAS JOURNAL" for Feb. 3.

* * *

In this article, Mr. Goodenough, discussing the best means of meeting the Government's electricity development scheme, remarks that goodwill is the only safe and lasting foundation for business. "How many gas undertakings," he asks, "are really popular with their consumers? How many gas undertakings know in detail whether they are popular or not? How many gas undertakings act consistently on the principle of studying their customers' requirements and interests in every detail, and are doing everything in their power to meet those requirements and serve those interests (including the supply of only first-class, efficient fittings and appliances)? How many are employing and training an adequate staff capable of giving all the service to all their customers that such a policy necessarily involves? Yet none of them can feel perfectly safe of weathering satisfactorily, and ultimately profiting by, the growing competition of electricity that the future certainly holds for them, except those who have not only adopted such a policy in principle, but have applied it thoroughly in practice; and this, we would emphasize, is impossible without an adequate and capable staff, far larger and far more capable than is contemplated by many undertakings who have adopted in principle the policy of 'good service,' and flatter themselves that therefore all is well."

* * *

Mr. Charles Taylor, of Stretford, writing in the "Daily Express" says: "With reference to the statement that no cure for a common cold has been found, if anyone suffering from a cold will inhale the fumes from a coke fire, he will be cured almost immediately. The fumes, besides killing the germs, cause the sufferer to cough, and thus expel them; and the small quantity of fumes required is totally harmless." Here, then, we have still another use for coke.

* * *

Reports are coming to hand of the progress of various gas companies in 1925. The first statutory undertaking to hold its general meeting was the Aldershot Gas, Water, and District Lighting Company; and a passage from the remarks of the Chairman and Managing Director (Mr. R. W. Edwards) is well worth repeating here. He said: "The progress for the year has again been satisfactory, the sales having increased by nearly 7 p.ct. (6·8 p.ct.), which, with the 1924 advance of 12½ p.ct., brings our cumulative increase for two years to over 20 p.ct. (20·15 p.ct.). We have added 533 consumers, and fixed 611 cookers, 842 fires, and 230 hot water appliances—in total, an increase of 31·3 p.ct. over 1924. This continued expansion, largely in the fixing of apparatus in existing consumers' houses, is a record of activity by our sales department. It it the most advantageous form of gas business expansion, to increase the consumption per service, as it is more economical in its capital expenditure. Of course, I do not suggest that we restrict our activities to the addition of apparatus to existing services. On the contrary, the fact that we have added in two years nearly 1800 new consumers shows that the sales department is giving attention to both forms of new business. The outlook in our districts for expansion is considerable." Aldershot are certainly to be congratulated on their remarkable increase.

* * *

In 1925, the Bath Gas Light and Coke Company increased their sales by 5 p.ct.

* * *

Electricity *v.* gas trials are being conducted under the auspices of the Leeds Corporation. The Improvements Committee have decided that on all the new estates in course of development twelve houses shall be specially equipped for the tests. Six will be all-gas and six all-electricity houses; and the experience and opinion of the twelve housewives concerned will, in the case of each estate, largely decide the future equipment of the houses. Vital factors in the test will be efficiency, economy, labour-saving, and cleanliness. On the new Middleton Estate, where the coal fire and coal cooking equipment of a hundred houses has been supplemented by gas for washing and electricity for lighting, a large number of residents have approached the Leeds Gas Department with a request for gas fires and cookers.

An Elementary Treatise on Gas Lighting.

For the Student Gas Salesman.

[COMMUNICATED.]

(*Continued from p. 7.*)

Globes, shades, and reflectors are most important in illuminating engineering practice, and merit close study. Their principal functions have been well summarized by J. G. Clark and V. H. Mackinney* :

(i.) To tone down the excessive brilliancy of an illuminant.
(ii.) To direct the light where it is chiefly needed.
(iii.) To soften the shadows.
(iv.) To serve as an object of decoration.

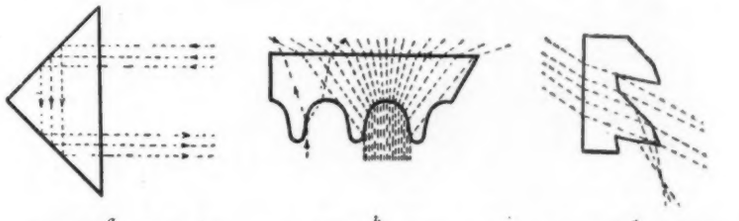
The original object of a gas chimney or globe was to protect the flame from dust and currents of air; and, at the same time, to create the necessary draught to ensure complete and speedy combustion.† The employment of a chimney or a globe accelerates the combustion of gas; and we have seen already that accelerated combustion means higher flame temperature, which in turn favourably affects the performances of flames and incandescent mantles. Moreover, chimneys or globes act in another advantageous manner, as conservation of light-source temperature results from such screening of the flame or mantle from the cold surrounding air as is afforded by these accessories.

The earlier sources of artificial light—oil and gas flames—were not sufficiently glaring to necessitate any reduction of intrinsic brilliancy‡ for visual comfort; but, though from the strictly utilitarian point of view it sufficed to surround these sources with transparent glass, the art of shading was appreciated, and ornamental globes and shades were often used for decorative purposes. We have as an example of this the world-known "Christiania" burner, produced by the late William Sugg about fifty years ago, which carried an opaline globe hand painted and fired—a burner which Dr. Carpenter§ has described as being "one of the first successful attempts to combine pleasing design with efficiency."

With the introduction of incandescent radiants, it became essential to tone down the intrinsic brilliancy of these sources by radiating from a larger surface of translucent material such as opal, opaline, ground and etched glass, &c., to which must be added the more recent materials known as "Holophane" glassware, "Vitreosil," "Supastone," &c. Of course, as the opacity of the material increases, the loss of light by absorption becomes heavier; but in opal (white) glass we have a very satisfactory material—notwithstanding the fact that it may cut off 25 p.ct. and more of the light—since it gives a uniform surface brightness which helps considerably to soften shadows.

Lightly sandblasted and etched glass is not so good in this important respect, for, though the transmission of light may be greater, the shape of the mantle is usually discernible through the glass as a bright patch. Tinted, semi-obscured globes are in much the same category, since the source can often be seen through the glass; and frequently the patterns marked on the glass cause bright points of light—a defect often characteristic of inferior cut glass. "Holophane" glassware is made of colourless, transparent material which is pressed and annealed to produce toughness. The moulds employed are specially cut so that the prisms of the glass article can be pressed up very sharply; and the reflectors are provided with external stiletto-shaped 90° prisms which control the light by internal total reflection in the manner shown in fig. 141a. The contour of the reflector is designed to give a predetermined distribution curve when covered with such ribbings or prisms. The globes are provided with vertical ribbings on the interior (see fig. 141b) and horizontal ribbings on the exterior (see fig. 141c). The interior ribs are visible, and the surface of the globe appears to be divided up into prismatic points arranged in regular rows. The ribs often differ from one another, and each rib has a number of separate faces with different duties to perform. The prisms and faces are calculated by the laws of geometrical optics, and combine the principles both of refraction and reflection—to be referred to presently.

A noteworthy development of recent years in connection with globes and fittings has been the introduction of "Vitreosil" (silica ware), now used in many and varied forms. This material is similar to the silica cups first introduced for use with the Keith high-pressure lamp, but is now generally applied to low-pressure burners and lamps. The primary advantage claimed for chimneys and globes of this material is their toughness and power of resistance to changes in temperature, draughts, &c. In spite of the relatively high initial cost, their use has been amply justified by reduced costs of maintenance, as they break but rarely and the life of mantles is prolonged—partly because they are not liable to be destroyed through glass-breakage, and also because they may often be continued in use when partially broken, as the impact of the flame on this material does not damage it. "Vitreosil" has a milky appearance, but, from the standpoint of avoiding glare, this may be considered an actual advantage. The fact that the material can be brought so close to the mantle leads to compact design (it also favourably affects flame temperature), and the translucent surface which diffuses the light, but conceals the mantle, is often of value in enabling an inverted burner to be introduced into an upright fitting. Thus the advantages of the more efficient inverted burner are obtained without affecting the desired impression of an upright standard or pendant. One other interesting feature of "Vitreosil" is that the colour of the emerging light is appreciably modified, becoming somewhat more golden in tint; and it is also worth mentioning that there are available closed globes of this material having narrow slits at the side, for secondary aeration. Such globes are particularly valuable in cases where it is desired to avoid possible dropping of hot parts from the mantle. "Vitreosil" reduces the light output at the high angles, but, owing to its reflecting qualities, it increases it at the lower angles (where the maximum intensity is usually required in practice) when open bottom cylinders are used—see an example of this, fig. 142. The closed "Vitreosil" cup or globe reduces the light output at all angles, but gives a fairly uniform distribution curve. When used as bowls in semi-indirect lighting, "Vitreosil" does not transmit so much light as opal or frosted glass. The globe or cylinder should not fit the mantle or cluster of mantles too closely. This is a mistake which is sometimes made. There should be sufficient space between the wall of the cylinder and the mantle(s)

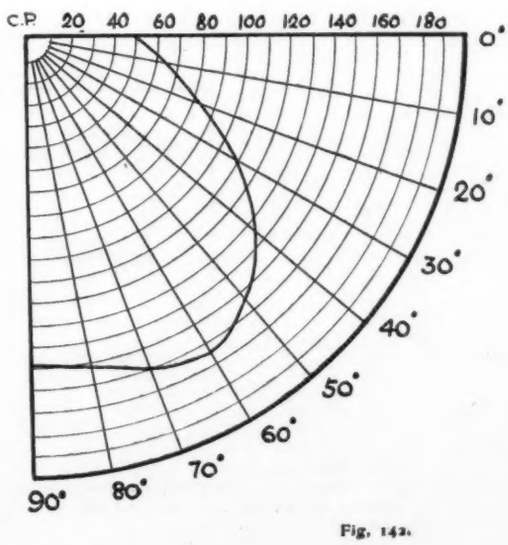


a Enlarged view of Total or Double Reflecting Prisms.

b Enlarged view of Internal Prisms; and Method of Diffusing Light.

c Enlarged view of External Prisms, showing both Refracting and Reflecting Faces.

Fig. 141.



"Thermalite" Burner with Standard No 3 Mantle.

Fig. 142.

*See "Illuminating Engineer" (London), Vol. VI., March, 1913.

†See remarks on Argand burners, "SALESMAN" for Dec. 27, 1922.

‡See Table 9, "SALESMAN" for June 24, 1925.

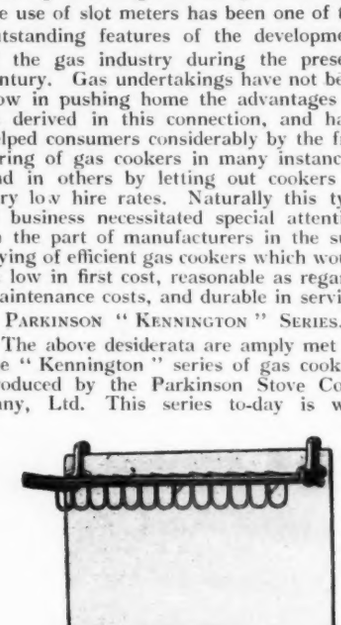
§See "Some Gas Burners and a Moral," 1922.

A Popular Cooker.

The growth of gas consumption through the use of slot meters has been one of the outstanding features of the development of the gas industry during the present century. Gas undertakings have not been slow in pushing home the advantages to be derived in this connection, and have helped consumers considerably by the free hiring of gas cookers in many instances, and in others by letting out cookers at very low hire rates. Naturally this type of business necessitated special attention on the part of manufacturers in the supplying of efficient gas cookers which would be low in first cost, reasonable as regards maintenance costs, and durable in service.

PARKINSON "KENNINGTON" SERIES.

The above desiderata are amply met by the "Kennington" series of gas cookers produced by the Parkinson Stove Company, Ltd. This series to-day is well known throughout the country, and because of its sterling qualities has been adopted by many gas undertakings for slot and simple hire purposes. Several alternatives are offered in the make-up of the cooker. Two widths of door opening—those in universal use—are made. The cooker can be entirely unpacked, or the door only may be packed and enamel-lined. Alternatively, the oven can be packed and lined throughout, while an enamelled door panel can be fitted when required. The hotplate can be fitted with two boiling burners and a grill burner. A larger hotplate has an additional boiling burner. These burners are of the Parkinson special interchangeable type, enabling the stock of replacement parts to be maintained at a minimum. All taps are at the front, and the range of the hotplate burners is such as to cover all boiling operations. The usual extras, such as stands with black or white enamel top, plate-rack and back-plate, and enamel crownplate with or without a trough at the front, may be had as required.



The "Kennington" Cooker.

"A" Type Hotplate—Two Boiling Burners.

"B" Type Hotplate—Three Boiling Burners.

The foregoing indicates the comprehensive range of utility of the "Kennington" cooker; but it should be mentioned that recent developments of this series include the manufacture of a specially deep oven (No. 6827), of particular interest to North Country users requiring a cooker capable of baking bread and holding four 2 lb. tins on one shelf.

Special literature relating to "Kennington" cookers will be forwarded on application to the Parkinson Stove Company, Ltd., Stechford, Birmingham.

Small Silver.

From time to time there have been complaints as to the shortage of copper coinage in the country; and this has been ascribed by the authorities to the large amount of pence locked up in the slot meters of gas undertakings. In London people are now noticing that there is a shortage of small change—shillings and sixpences—and that the greater proportion of change, when purchases are made with treasury notes, is in the form of florins and half-crowns. The banks also affirm that they are getting less of the small variety of silver; and the assumption is that it is due to the increasing use of shilling-in-the-slot meters—particularly in flats, hotels, residential houses, and other places. This, again, cannot be helped. The authorities who look after the minting and issue of the coinage must, the same as other people, meet the changed conditions of the times; and one of the great changes that have come into the life of the country is the practice of purchasing gas through prepayment meters.

An Electricity Consumer's Experiences.

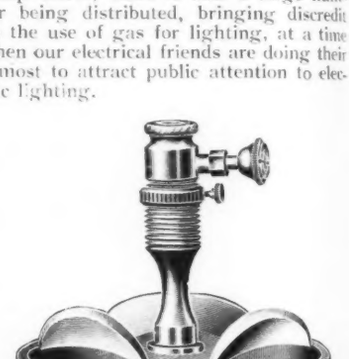
In a recent issue of the "Daily Mirror" (Jan. 21), "John Albion" writes on the subject of "Visions of an Age of Electricity." He maintains that in the first place the housewife must be converted; but, from what he says, it appears to us that it is not so much the housewife who needs to be converted, but that the electrical appliances which are supplied to her should be designed and finished so that reliability and efficiency will do their winning work.

"John Albion" has at one time or other purchased and experimented with nearly every electric domestic gadget on the market. He tells his readers that he paid over £100 for an electric cooking range, and then was told that it must not be used after sunset, because there was not enough power available. He confesses that this did not matter much, because the cook he then had was frightened of the range, and would not touch it. It was used once to cook a chop, and occasionally to boil a kettle—that was all. Leaving this white elephant, he states that he bought an electric vacuum carpet sweeper, which the maids flatly refused to use. Then an excellent device for warming beds at night was discarded. His people preferred rubber hot-water bottles. A plate-warmer got burnt out; and the toast-rack on the breakfast table scorched the bread in bars. Three successive shaving pots were destroyed. While admitting that women like electric radiators because they are simple and save trouble, he says that at present rates they are extremely expensive. He is the possessor of twelve electric radiators; and he finds them useful for warming bedrooms in the evening; but they are too costly to use much for other purposes—except in the early autumn and late spring, when fires are not required. In his opinion coal beats the radiator every time.

Women, "John Albion" believes, like the little electric appliances for boiling a kettle in the bedroom; and they are also partial to the flat iron, although they are always falling over the flexible attachment. But for most other electric appliances, they seem to have no use whatever.

Reliable Burner at Low Cost.

In spite of the efforts made by gas undertakings to stop the sale of cheap and shoddy burners and fittings by small ironmongers, oil and colour merchants, and cheap stores, there is still a large number being distributed, bringing discredit on the use of gas for lighting, at a time when our electrical friends are doing their utmost to attract public attention to electric lighting.

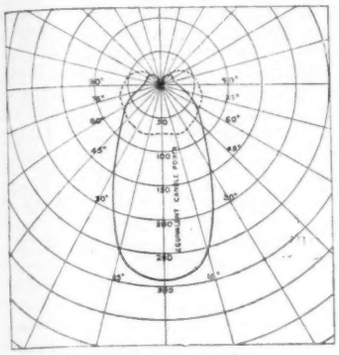


The best way of combatting this is for gas undertakings to distribute really efficient lighting appliances at an equally low figure. The Bland Light Syndicate, Ltd. (of 25, Grosvenor Place, S.W. 1), who have always had a high reputation for quality, have been able, by mass production, to turn out a good and reliable burner to meet this need, at a low price. It is made of heavy aluminium, or brass, steel, or copper bronzed, to take one universal, two No. 2, or three bijou mantles fitted on superheater, at little extra cost. The burner, which has been registered in design, is an attractive pattern, splendidly made, and worthy of serious attention.

Shopping Made Comfortable.—The ever-increasing traffic problem is leading to a steady reduction in the number of streets in which stallholders may carry on their business; and these stallholders, with many other tradesmen, are steadily finding their way to the covered-in market, of which in recent times there has been a somewhat phenomenal growth. Nearly all of them want a gas fire to keep them warm, and gas lighting to make their stalls attractive at night-time; and in various productive operations they need gas appliances. No. 143 of "A Thousand-and-One Uses for Gas" deals with this subject.

CANDLE POWER.

Designation.	Mantle.	Mantle with Reflector.
M.S.C.P. ..	52·0 ..	50·0
M.U.H.S.C.P. ..	35·0 ..	18·5
M.L.H.S.C.P. ..	69·0 ..	81·5



Photometric curves.—Burner alone - - - - -.
Burner with reflector ———.

Fig. 145.—Holophane Focussing Reflector equipped with Inverted Gas Burner (universal size) and Inner Chimney.

mean lower hemispherical candlepower.*

An example of this is provided in fig. 144. The curves reveal these data:

—	"C" Mantle Only.	"C" Mantle with Globe.
Mean spherical c.p. .	58·0	55·0
Mean upper h.s.c.p. .	60·7	45·4
Mean lower ,, .	55·3	64·6

Loss by absorption, calculated on M.S.C.P., 5·17 p.ct. Increase in mean lower hemispherical candlepower of 16·8 p.ct. Notice how the light is intensified in a horizontal direction. Other examples are given in certain figures of the intensification of light in the lower hemisphere in the case of inverted burners with various globes and reflectors. Of these, we may take for comment figs. 142 and 145. In the first case the mean lower hemispherical candlepower of a universal mantle is increased from (say) 80 to 115 by employing a plain open-bottom "Vitreosil" cylinder—the maximum candlepower (160) obtaining at 60°. In the second case we have the following data in respect of a "Holophane" focussing reflector:

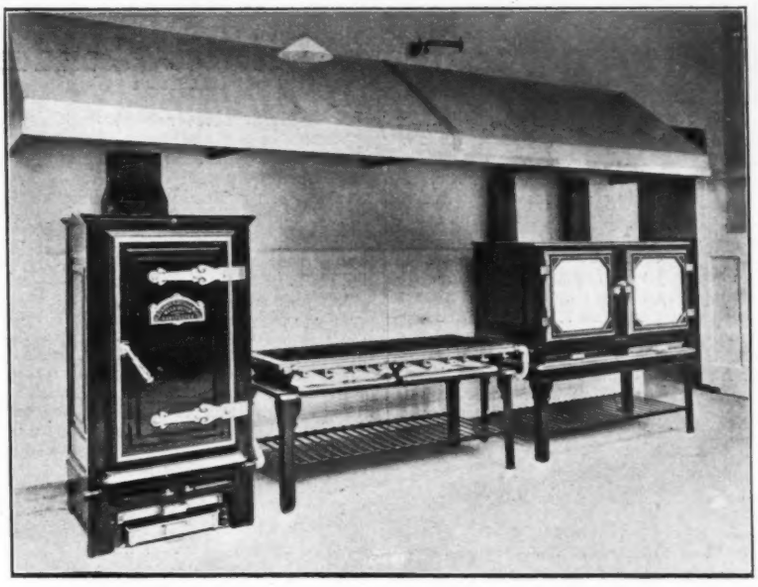
—	Universal Mantle Only.	Universal Mantle with Reflector.
Mean spherical c.p. .	52 0	50·0
Mean upper h.s.c.p. .	35·0	18 5
Mean lower ,, .	69·0	81·5

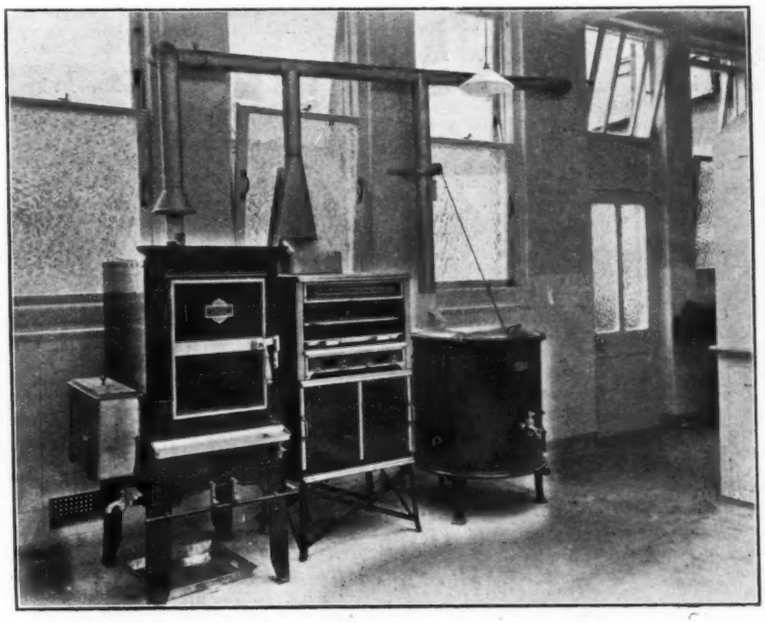
Loss by absorption, calculated on M.S.C.P., 4 p.ct. (approx.). Increase in mean lower hemispherical candlepower, 18·12 p.ct. Notice how the light is intensified vertically downwards. The effect of a "Supastone" globe (see fig. 143b) upon the initial distribution curve of an inverted mantle is also worthy of special mention. The final curve (full line) is a very serviceable one for certain purposes; and the globe is particularly suitable for house lighting where something plain but efficient is wanted.

* Of course, the effect in this connection may be great or small, depending upon the character of the initial distribution curve—a circumstance which also applies to reflectors.

(*To be continued.*)

Watford Peace Memorial Hospital.





The Watford Peace Memorial Hospital was recently opened by Her Royal Highness the Princess Mary, Viscountess Lascelles. The building is an excellent one; standing in beautiful grounds of about five acres, some distance from the main road. The hospital provides accommodation for 116 patients, and has a staff of 40.

It is of interest to know that the kitchen appointments are in keeping with the remainder of the building, and that its cooking equipment is an all-gas one. We reproduce two photographs of the kitchen.

The installation consists of a large gas roasting oven, a boiling hotplate 6 ft. long, two gas ovens mounted on stand, a gas heated steamer, a gas griller with hot closet, and a vegetable boiler with enamelled pan. A large aluminium hood is fixed over the ovens and hotplate.

The Watford Gas Company supplied and erected the gas cooking appliances in the central kitchen, and also in the ward kitchens; and the appliances were made by Fletcher, Russell, & Co., Ltd. (Radiation, Ltd.).

Boys' Hearth Coke Fire.

Prof. C. V. Boys, in a letter to the "GAS JOURNAL" for Feb. 10, concerning his method of burning gas coke in the domestic fireplace, says: "So satisfactory is the domestic fire such as I have described fed with 'common' gas coke, that the reiterated demand for low-temperature carbonization as a necessity for obtaining a smokeless fuel for domestic use is really absurd. . . . May I suggest that the country gas manager might increase the sale of his coke *pari passu* with its production, if he would set-up a coke-burning hearth in his showroom, and then persuade the proprietor of the leading local hotel to have one fitted in the hall or dining room under a satisfactory arrangement as to the supply of coke (unbroken), so that business people who all meet there should do so before such a fire, and thus learn its advantages."

to ensure complete secondary aeration. For this reason (since there is nothing more detrimental to gas lighting than imperfect combustion) the writer finds it inadvisable to use a No. 2 mantle with the straight-sided bijou inverted cylinder. The No. 1 size is much to be preferred. There is more room with the thistle pattern cylinder; and here No. 2 mantles may be used. But the experience of the writer inclines him towards the use of No. 1 mantles with all bijou types of cylinder.

"Vitreosil (pure fused quartz or silica ware) consists of pure silica fused by the original and patented electric process of the Thermal Syndicate, Ltd., into a thoroughly homogeneous and uniform product containing over 99·8 p.ct. of SiO_2. It is manufactured in transparent—*i.e.*, fused quartz—and translucent varieties, and its principal property is its great resistance to heat and acids. It is among the most refractory of materials, melting at about the same temperature as platinum (between 1700° and 1800° C.). The melting point is, however, not well defined, as an appreciable softening of the material takes place at about 1500° C.; but for general purposes 1100° C. may be regarded as a safe working temperature. The value of the coefficient of expansion (0·54 by 10^{-6} per degree C.) is extremely small—about one-seventeenth that of glass—and is maintained practically unchanged up to 1000° C. Above 1000° C. the expansion rate increases, attaining a maximum of 1·2 by 10 per degree C. at about 1100° C. Largely on account of its small expansion coefficient, Vitreosil may be subjected to rapid and extreme changes of temperature without danger of breakage. Vitreosil is unaffected by mineral or organic acids, with the exception of hydrofluoric and, at high temperatures, phosphoric."*

Fig. 143a.—Universal "Supastone" globe.

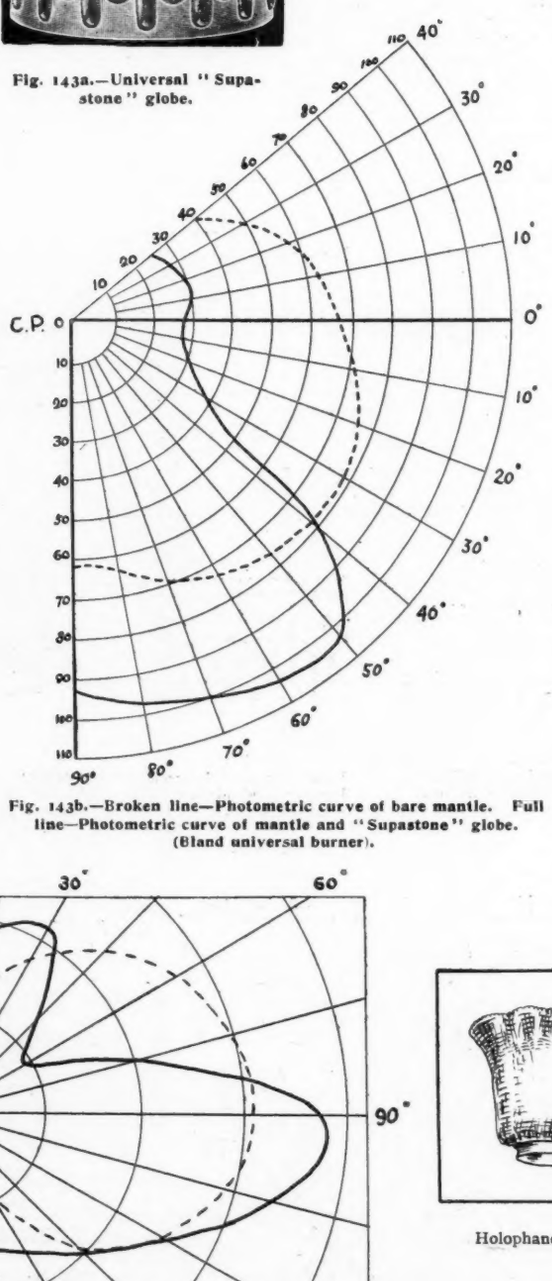


Fig. 143b.—Broken line—Photometric curve of bare mantle. Full line—Photometric curve of mantle and "Supastone" globe. (Bland universal burner).

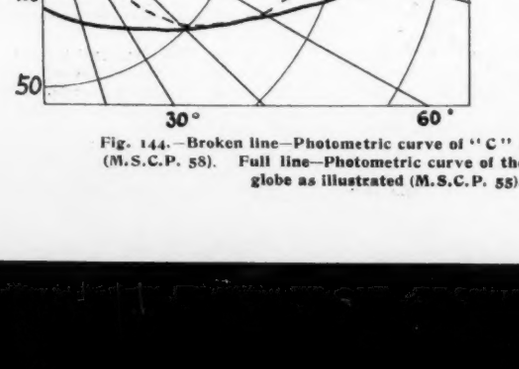
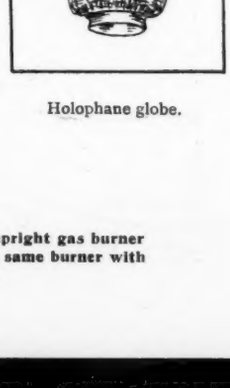


Fig. 144.—Broken line—Photometric curve of "C" upright gas burner (M.S.C.P. 58). Full line—Photometric curve of the same burner with globe as illustrated (M.S.C.P. 55).

"Supastone" is a comparatively new material, and it has forged very much to the front recently. This excellent and moderate-priced material is made of three-ply glass—inside clear, centre opal, and exterior satin finish. The common form of plain (general purposes) "Supastone" globe, shown in fig. 143a, intensifies the light at the lower angles—see polar curve, fig. 143b—and gives a mellow, creamy hue to the emerging light, the whole surface of the globe possessing a uniform brightness. "Supastone" is available in a large variety of plain and decorated forms for globes and bowls, and makes a most satisfactory diffusing material. Clear glass cylinders find useful employment with burners fitted to silk flounce pendants, &c.—such as are commonly used for lighting dining rooms; and they considerably intensify the light vertically downwards.

Broadly speaking, we understand by the term globe any type of glassware which more or less completely encloses an illuminant. It is, of course, intended that such appliances shall modify the intrinsic brilliancy of a source by being placed between it and the eye; and as the late Dr. Bell has said, it is "the first requirement of any globe that it shall soften and diffuse the light it shelters. However ornamental a globe may be, it falls short of its fundamental purpose if it fails to eliminate glare and to render the illumination more practically useful by improving its distribution. If this is not done, no amount of ornamentation can hope to make a globe tolerable from an aesthetic standpoint; and almost any ornamentation is permissible that does not defeat this well defined object. For artistic reasons it is sometimes desirable to reduce the illumination to a deep or mellow glow, irrespective of economy; and in such cases globes and shades may be made ornamental to any degree and of any density required. But gaudy, spotted, and striped affairs are useless even for these ends." To summarize, the main points to bear in mind in designing or choosing a globe are:

(1) That it shall entirely conceal the source of light.
(2) That the dimensions and properties of the material shall be such that the diffusing power of the globe will give a uniformly bright result all over.
(3) That it shall not show offensively bright spots or exhibit a streaked and mottled appearance.
(4) That it shall modify the light distribution curve of the unscreened source, making it more practically useful—in general increasing the



Holophane globe.

* Extracted from "About Vitreosil"—an instructive publication by the Thermal Syndicate, Ltd.

B.C.G.A. Gas Salesmen's Circles.

Southern District—London Area.

A Meeting of the Circle was held on Tuesday, Feb. 2, at 28, Grosvenor Gardens, Westminster—under the Chairmanship of Mr. STEPHEN LACEY, B.Sc.—at which an inspiring address was delivered on a highly important aspect of gas salesmanship. The address (which was by a well-known contributor to the Press on ladies' topics) was followed with close interest by the large number of members present, and gave rise to an animated discussion.

The CHAIRMAN remarked that their lecturer for that evening might imagine from her audience that there were no ladies engaged in the industry; but, as a matter of fact, as the members of the Circle knew, they had many. They were, of course, profoundly interested in the woman's point of view, with which Mrs. Noble had promised to deal. When they wanted it, they generally went home and got it in the form of "home truths." Mrs. Noble intended now to give them some "home truths;" and he had the greatest pleasure in asking her to do so.

THE WOMAN'S POINT OF VIEW.

By Mrs. ROBERT NOBLE, Lady Journalist.

First of all I should like to tell you that I feel I ought to apologize for coming as an amateur to speak to experts. I am not going to address you as one knowing a great deal about the subject of gas, but as one who is, as a practical housewife, deeply interested in the question.

GAS APPLIANCES NOT "GADGETS."

I would remind you that women to-day are very keen buyers of anything that is described as labour saving; but at the same time they have grown to look with some suspicion upon what are usually called "gadgets"—a term which very aptly describes those small pieces of apparatus which may be bought for a few pence in any ironmonger's shop, but which are really dear, because they are so tiresome to use. Now, gas appliances are sometimes described as "gadgets;" and I do not think it is a very fair description, because they really do fulfil what they set out to do.

Another thing that strikes me very much as a journalist is that women shop to-day with a very great deal more discretion than they did a few years ago. That is due to the fact that so many women, before they start homes of their own, have themselves taken part in business, which causes them to adopt a different attitude with regard to the spending of money. This, of course, gives the salesman a tremendous "pull." He has no longer to adopt merely the rôle of the tempter, trying to persuade a woman against her will to buy, but he is able to appeal to her reason, and draw her attention to the advantages accompanying the use of a particular piece of apparatus. That is an aspect of selling which is entirely modern.

WOMAN THE HOME-MAKER.

In selling to women, of course, it is very important to have some insight into the psychology of the feminine mind. Women are essentially home-makers. Men are home-makers, too, fundamentally; but women are so in a broader sense, because they spend so much more time in the home than men. This means that they are able to judge from the closest possible point of view any shortcomings of the apparatus or equipment in the home. Women know that more than half of their home troubles are due to defective apparatus of one kind or another. Therefore when a salesman is discussing with a woman equipment of the home, he is able to bring this very forcibly to her mind. I am not quite sure whether it is the rule for women who contemplate buying gas apparatus to come to you, or whether you go to them.

The CHAIRMAN: Both.

Mrs. NOBLE: I know in my own case when I have bought a large piece of apparatus I have had to go to the gas company's showrooms and inspect samples; but I was not sure what would happen in the case of smaller things. At any rate, first impressions count for very much when a woman goes into a shop or showroom. A great part of her day is, generally speaking, occupied in chasing away dust and dirt; and if she comes into a showroom which suggests the sort of room she would wish to see in her own house, she is all the more likely to be favourably impressed with the apparatus she sees there. Of course, if she sees a whole row of (say) cookers, she can compare them one with another; but if she sees one placed as she would probably place it in her own kitchen, she will be the better able to realize how well it will meet her requirements.

APPEAL TO PRIDE.

It has also occurred to me that, in offering things to a woman which you hope she will buy, it would not be a bad thing to make an appeal to her pride in herself and in her home. I think that in selling gas apparatus to a woman you have a tremendously strong case to bring to bear, if you appeal to her pride in herself, because gas appliances do so greatly assist a woman to maintain pride in herself. If you are able to assure her that the use of efficient gas apparatus will enable her to preserve her good looks, I think she will listen attentively to what you have to say. Take the case of the gas fire. You must hundreds of times have pointed out how much labour it will save; and you might add that it will assist her to keep her hands in much better condition. If you talk about cooking, you can point out that it is very much easier to regulate the heat with a gas cooker, and that with it she need run no risk of damaging her complexion. Again, you can tell her that in summer time, when the kitchen gets over-heated with a coal range, there is no need for it to become uncomfortably hot when a gas cooker is employed, because one has the heat on only during the time when it is actually needed for cooking. Then, of course, with a great many of the new gas cookers, it is just as well to draw attention to the fact that a woman will not have to stoop in order to see what is going on in her oven; and if the cooker is placed in a good light, she will be able to get through her work with a minimum of discomfort.

With regard to the second aspect of appealing to a woman's pride, most women are, of course, very proud of their homes, and anxious to make them as beautiful and as comfortable as possible; and when you are advocating the use of any particular gas appliance, you can very well emphasize that point, because it cannot be denied by anyone that a great many of these appliances do enable a woman to keep her home in a very much more attractive condition than would otherwise be the case.

The time of year is now arriving when women's thoughts will be turning to spring cleaning. This offers a great opportunity to you, for you can point out that the cost of spring cleaning will, by the use of gas fires, be very much reduced. Women know how serious is the cost of cleaning. Not only is there the expense of sending things to the cleaners, but there is the outlay on materials and labour needed to keep a house in good order. If a woman is brought to realize that at the end of a very short time the saving under these various heads will compensate her for the outlay involved in installing gas fires in her rooms, you will not find it very hard to convince her of the desirability of doing so.

GAS FIRES NEED NO ATTENTION.

Another point that women frequently overlook is that in a living room one person's attention is needed almost incessantly to keep a coal fire going. The busy woman is apt to forget the coal fire. It is one of the great advantages of the gas fire that if you leave it burning it will attend to itself; while when the room is unoccupied fuel can be saved, and it is but a moment's work to light the fire again when warmth is needed.

A SMALL GAS BILL.

Lately I spent a month in a flat where there was only one coal fire. Gas was employed in all the other rooms, which were used freely; and we utilized gas for cooking all the time. There were two servants and six members of the family; and we had an almost marvellously small gas bill at the end of the time. We just used the gas as we needed it; and the result was very satisfactory.

Women no doubt very often come to consult you about the different ways in which it is possible to obtain hot water, and to ask your advice regarding the system to adopt. The other day I was rather amused at being told by another journalist that she had just heard from one of the makers of a coal-burning fire that supplies hot water from a boiler fitted behind the stove, that it was absolutely out of date to propose a geyser for a bathroom. He said: "If you have a fire in the sitting room, why not utilize it for heating the water?" I asked: "What is going to happen in the summer, when there is no fire?" "Ah!" said my informant, "I wish that point had occurred to me at the time the statement was made."

THE NURSERY AND BEDROOM.

Then, in considering the nursery, I think one of the most important things to tell a woman, when she is debating whether or not she will have gas there, is that it will save her a tremendous amount of trouble in seeing that the room is always sufficiently warm when it is needed for the children. A great many women still cling to the old prejudice against gas fires; and it needs someone who can speak with authority to explain to them that there is no reason whatever to fear the "bogey" that gas is unhealthy. Again, with regard to bedrooms, it may be pointed out that a great many people get chills from going out of a hot sitting room, through a draughty passage, and into a cold bedroom. Lots of bad colds would be avoided if all bedrooms were comfortably heated in winter; and the great difficulty with coal fires in bedrooms is that they cause so much extra work.

THE MODERN SERVANT.

The modern servant realizes that there are now a great many labour-saving appliances about; and she will not go to a house that is not properly equipped with

them. People who have their houses adequately fitted in this respect have no difficulty in getting good servants or in keeping them. Good servants know that excellence of their work does not depend entirely upon themselves, but that there are other factors which also have to be taken into account. Some women do not realize, too, that their homes become for the time being the homes of their servants, and that therefore there is no reason why the servants should be content with anything less than home comfort.

In small houses a great deal can be done to make the kitchen a comfortable sitting room. Even if it still remains a kitchen, a servant will be much more likely to remain in her situation if, when the hardest work is done, there is a cheerful gas fire to sit by in the winter, and if, when the cooking is over, the kitchen is well ventilated in the summer.

GIFTS TO THE HOUSE.

Speaking as a journalist, I am, at certain seasons of the year, often put to it to introduce special articles appropriately; and I would suggest that you should try to do this. You see in the papers "A Present for Him" and "A Present for Her;" and I can see no reason why it should not be suggested that a present should be given to the house, because everyone would benefit from it, if it were a useful present. When spring cleaning time comes round, for instance, I think women will be very ready to listen to advice that they shall present the house with some form of apparatus that will reduce costs and make the home more comfortable.

My private opinion with regard to selling to women is that, when you get hold of one who is ready to listen, and is obviously a little in doubt as to what it is right to do, the best thing is to try to visualize the kind of home she is endeavouring to make as perfect as possible. This will help the salesman very much.

I do not think there is anything else I wish to say to you this evening. I ask you to be very lenient in criticizing what I have said. I do not pose as an expert, but as a housewife and as a journalist who is sometimes asked to give advice to readers in connection with the fitting-up of their homes.

Discussion.

The CHAIRMAN said Mrs. Noble had concluded her very delightful address by assuring them that she did not pose as an expert. He did not think many of those present could have stated the case for gas in the home with the lucidity and charm that she had used. The arguments for gas were always in their minds; but they were apt to become rather abstract. They lost touch with reality; and an address by a lady who was really a specialist in putting forward the woman's point of view made the matter real to them again. He liked particularly the advice to visualize the kind of place in which the gas apparatus was going to be put. This appeared to him to be very sound advice indeed. ["Hear, hear."] He thought the kitchen was the room in the house which had improved, in the last twenty years, beyond recognition. There was no doubt the modern woman's view of what a kitchen should be, explained the demand for cookers that really looked decent. He had had a little kitchen of his own well equipped; and he thought it was now the most pleasant room in the house. He would ask Mr. Walker to open the discussion.

Mr. J. C. WALKER (Hon. Secretary) felt it a great privilege to be called upon to open the discussion on Mrs. Noble's address. There were several phases of it that had struck him very forcibly. The first was, perhaps, the reiteration of some of the things they felt they knew very well with regard to gas. It was something to know that a lady had come along to their meeting and shown appreciation of things which they had for so long a time been trying to bring before women. Secondly, he would like to touch upon Mrs. Noble's reference to women's outlook on life to-day compared with what it was ten or fifteen years ago. They had all of them to realize that the woman of to-day was different from the one they formerly knew. A very large proportion of the women of to-day had had business experience, and the education afforded by a live Press. There was every inducement now to be out and about, broadening one's experience; and the woman of to-day was consequently not the little housemouse that she might have been twenty years ago. In their dealings with her, they had to appreciate this fact. Mrs. Noble had emphasized the importance, in dealing with women, of selling the service that gas provided, rather than the gas appliance. She had indicated some of the many directions in which an appeal could be made to women when the subject of the home was under consideration; and his own view was that in concentrating more particularly on the service that gas provided, one would be on the right lines. Most important of all, in his opinion, was that the industry needed to take into its counsels, so far as the domestic side of the business was concerned, the thinking woman. He himself believed that the manufacturers of appliances to-day could profit very considerably by a more frequent invitation to women to criticize their ideas. Personally, he had come across instances in which women had expressed astonishment at the seeming lack of foresight on the part of the men responsible for the arrangement of houses and the design of appliances. On the other hand, the gas industry had still much to do in the way of educating women—and particularly the rising generation—to the advantages of gas. Even now, much prejudice remained which must be eradicated.

Mr. H. H. CREASEY (London) said there was no doubt that women were the greatest friends they had as an industry. Were it not for the woman in the home, he questioned whether the industry would have got very far. Women had appreciated the service rendered by gas in making the home clean, in saving labour, and in partly solving the domestic problem. As to visualizing the home, it must be remembered that just getting an idea of the kitchen or dining room in question was not everything necessary. There were many things which must be considered. While they would like all places to look as nice as possible, there were many cases in which they were prevented from putting in the things they would desire, because the circumstances of the house would not permit them to do so.

Mr. P. PICKERING (Rochester) said they had been told many of the old truths in quite a new form, and had learned something from the address. If they could convince a housewife that they were able to make her independent of servants or to show her the way to keep those she had, they would have gone a long way. A point to which they might pay more attention was that of colour. Though gas apparatus on the whole was rather gloomily finished, there were coloured fires in their showrooms; and these could be of great assistance to them in dealing with women. White enamel always appealed to women, because of its clean appearance. They must pay great attention to detail in dealing with women. To his mind, the industry was being rather badly let-down by some of the cheap ironmongers who sold shoddy apparatus to housewives. Once she had tried a shoddy article, it was harder to persuade a housewife to buy a good thing.

Mr. A. J. GARWARD (Portsmouth) considered Mrs. Noble had struck a very important note in her references to labour saving. Did the gas industry sufficiently advertise the labour-saving qualities of gas appliances to-day? Of course, those representing the industry were doing their best to induce architects and builders to put in modern labour-saving gas appliances to help the housewife. No gas company pushed any appliance to-day which was not reliable; and under the schemes of maintenance which most of them had in operation, these appliances were kept in perfect working order.

Mr. HYDE (London) said that as the result of many years' showroom experience, he could speak as to the different type of customer they got now as compared with what was the rule in pre-war days. At present many people were buying their own houses, and desired to avail themselves of the best labour-saving apparatus available. The gas industry could claim that it had gone some distance towards looking at the subject from the woman's point of view. The gas cooker was an instance of this. In connection with fires, too, there had been a marked improvement in design, in the way of removing crevices in which dust and dirt could collect. Again, water heaters were at one time all in copper finish; but many of them to-day were in nickel or copper-bronze finish, which tended to reduce work on the part of the housewife. An efficient maintenance scheme was a great asset from the point of view of the housewife.

Mr. W. D. MEDCALF (London) said it was very helpful to get right back to the person who, after all was said and done, usually decided what apparatus was going into a house. The woman was really their customer. The majority of gas undertakings were improving their showrooms and brightening them up—using much more light paint than they did formerly. If they succeeded in giving the women who visited the showroom an impression of cleanliness, they had gone part of the way in selling their goods. Mrs. Noble had suggested that the saving in the cost of cleaning would soon set-off the outlay involved in installing gas fires. Some figures on this point would be extremely useful to them.

Mr. N. S. SMITH (Luton) said Mrs. Noble's remarks showed them that they had still a long way to go. Many of them had appreciated this in the past; but that evening it had been emphasized. Women had already done much for the industry by making suggestions with regard to gas appliances, &c.

The CHAIRMAN extended a welcome to Mr. Smith, now of Luton, but until recently Chairman of the Scottish Circle.

Mr. E. L. OUGHTON (London) expressed his appreciation of the address.

Mr. MORRIS (London) thought more might profitably be done in the way of calling attention to the fact that the gas industry were offering a commodity that could be guaranteed in respect of both quantity and quality.

Mr. J. H. JOHNSON (Hampton Court) asked whether it was not an advantage for a gas salesman who was interviewing a housewife to be a "domesticated husband," who could look at things from her point of view. [Laughter.] One of the most important things the gas industry had to do was to give satisfaction. They must be careful not to give women any cause for complaint.

Mr. A. TENNANT (Croydon) thought the fact that often, when fitted, gas apparatus was not beautiful was apt to militate against its finding a place in a house. More appliances would be used if all architects and builders made proper provision for gas apparatus, in the same way that they did for coal fires and ranges, so that there need be no unsightly flue pipes, or things of that kind.

Mrs. NOBLE, replying briefly to the points that had been raised, remarked that, of course, tact was an essential ingredient of salesmanship. It was true that much gas apparatus was ugly; but women were practical, and when they appreciated the service it would render them they would not allow themselves to be guided altogether by appearance. When speaking of the importance of visualizing the home in which the apparatus of a prospective customer would be installed, she meant that it was advisable to ascertain how many there were in family, and other details besides the size of the room. A great many bachelors nowadays were very wise indeed about domestic matters. It had been a very great pleasure to her to address the meeting. [Applause.]

The CHAIRMAN: You have shown by your applause how much you have appreciated Mrs. Noble's address.

A Big Gas Tank.—According to calculations made by the New York State Committee on Public Utility Information, a gas tank one mile wide, one mile long, and nearly 1000 ft. high would be required to hold the quantity of manufactured gas consumed during 1925 in all the factories and workplaces of New York State. This estimate is based upon reports received from gas companies covering the first ten months of the year, which establish new high records for the use of gas as an industrial fuel—indicating a consumption for these purposes of 25 p.ct. of the State's total output. Three-quarters of all heat treatment of metals for automobiles is now done with gas.

Lancashire and Yorkshire Circles.

Visit to Messrs. Fletcher Russell & Co., Ltd.

A Joint Meeting of the Lancashire District (Manchester Section) Circle and the West Riding of Yorkshire Circle was held on Wednesday, Jan. 27, when over 100 members inspected the works of Messrs. Fletcher Russell and Co., Ltd., at Warrington. These works have a distinguished and handsome frontage occupying a prominent position on the Wilderspool Causeway, one of the main arteries of the town. The front portion of this imposing range of buildings is given over to the business offices and general departments, separated from each by glass partitions. They are lighted, ventilated, and warmed by suitable apparatus, rendering them comfortable and healthy. The management cannot but be congratulated on the healthy appearance of those employed therein. There is here total absence of that bustle which is common enough in many similar establishments. The work is so arranged that the clerks are undisturbed in their duties, and are thus able to concentrate their whole attention on the business in hand. These departments are under the control of the Secretary, who has been in the service of the Company some thirty years, and is a member of the Board of Directors. He has ample reason to be proud of the admirable way in which the work is carried on under his able direction.

The visitors assembled in the extensive showrooms of the Company, where a large selection of the firm's manufactures is exhibited. They were met by Mr. W. Russell, Managing Director, Mr. J. H. Kemp, and other Directors of the firm.

Mr. RUSSELL welcomed the members of the Circles, and expressed the hope that their visit would be enjoyable and instructive.

The visitors were then conducted round the works. They saw how the raw material was conveyed to the cupolas, and how the molten metal was run into the prepared moulds. They passed through the pattern shop, and entered the core shop, where sand and loam are ground together to make the mixture which is used in the casting process. In a large foundry, castings weighing up to 3 cwt. are made. In another foundry, where special goods are produced, the moulding machines are worked by hydraulic pressure. This is a new departure; and the Company are anticipating good results from the use of these machines. The fettling shop and the grinding shop were inspected, and various articles being prepared for different finishes were seen. In the machine shop, burners and castings used in the construction of the different articles were being drilled and jigged.

In the special apparatus section, the members were particularly interested in the "Langham" ranges seen in course of construction. This high-class hotel range is one of the firm's specialities, and was the first gas cooker to be made with externally heated oven and enclosed hotplate; the original one—designed to compete with electrically heated apparatus—being installed in a London hotel. In this section was a railway dining-car suite, large boiling hotplates, vegetable steamers, &c.

In the tin shop, wash boilers, water heaters, tea boilers, and various other articles were being constructed.

In the finishing departments, porcelain enamelling of the sheet-iron linings for back-plates, exteriors, &c., was demonstrated.

Having inspected the electro-plating department and the paint and enamel department, the visitors were directed to the chemical and experimental laboratory, where furnaces of different types were shown in operation. The methods of testing all materials used in the manufacture of various appliances were explained.

Following the inspection of the works, the members were entertained at tea by the firm.

Mr. P. H. CHRISTIAN (Vice-President of the Manchester Section of the Circle) said that his first duty was to convey to the meeting the regrets of Mr. J. H. Sillitoe (President) on his inability to be present. A further duty—and a very pleasant one—was to propose a vote of thanks to Messrs. Fletcher Russell for the interesting and instructive visit which they had organized for the Circles. Every effort had been made by the officials to render the visit enjoyable, and all would agree that those efforts had proved successful, and had been highly appreciated. Salesmen should be thoroughly conversant with the details of the manufacture of the apparatus which they were called upon to recommend. They had had the opportunity of inspecting a works employing the most up-to-date methods of manufacture.

Mr. C. WATSON (President of the Yorkshire Circle) seconded the vote; and Mr. S. H. PACKER (Bradford) and Mr. J. RENNIE (Oldham) supported.

Mr. KEMP, on behalf of the Directors, acknowledged the vote.

Southern District—Sub-Section "A."

A Meeting of the Circle was held at Woking, on Jan. 8—Mr. C. J. EVES, of Reading, presiding.

GAS LIGHTING FROM THE SALESMAN'S POINT OF VIEW.

By W. L. WESTBROOK, of the North Middlesex Gas Company.

In his address before the London and Southern Junior Gas Association on Oct. 27, 1925, Mr. W. W. Townsend, Engineer and Manager of the Colchester Gas Company, suggested that, "as, owing to the altered conditions, distributing systems are not now working at full capacity during lighting hours, a discount might well be given for lighting purposes." With this opinion I am in full agreement.

Our competitors give preferential terms in order to increase their heating load, and, indeed, are generally speaking so ingenious in fixing their scale of charges that only an expert can really understand them. Let us keep our system of charges as clear and simple as possible, but by all means fight our competitor with his own weapons in the matter of discounts.

Though our competitors are keen on increasing their heating loads, it is their encroachments on our lighting business that really count; and it behoves us to do everything we possibly can to hold that business, and increase it if possible. I would not suggest a discount for lighting only, which would involve separate lighting supplies and an extra meter, but rather that a discount should be given, under agreement, on the whole account (subject to a minimum consumption clause) where gas is used for cooking, heating, and lighting throughout. In the fight to retain the lighting business, it is of first importance that gas undertakings should supply fittings and burners of the best possible quality and at the lowest possible price. All tubes should, of course, be seamless, and special attention be paid to wearing parts such as cup and ball joints, and taps, and also to gas and air adjusters of burners. Burners should be as silent in action as possible, and special attention should be given to the injectors. Some adjusters operate with a distinct side thrust, throwing the needle of the adjuster hard over to the side of the orifice, and so upsetting the even flow and the proper admixture of the gas and air.

The excellent lighting service given by the South Metropolitan Gas Company is due almost entirely to the great care taken in the manufacture and assembling of their famous "Metro" burners. Every part is carefully standardized, and all injectors, which are of the multiple-hole type, are subjected to microscopic examination. Every hole has to be perfectly round, and free from the slightest burr or irregularity likely to cause noise or upset the even flow of the mixture.

Given good fittings and burners, another important factor of successful gas lighting is regular and efficient maintenance. Have a well-trained maintenance staff; get your consumers to place their lighting in your care; and then keep the installations up to such a pitch of excellence that the public will be constantly reminded, by the examples to be seen, that gas lighting is still superior in quality to electric. Distance control devices should be fitted wherever possible, especially in conjunction with outside lamps. It is no joy to the shopkeeper to have to go out on a wet and stormy night, armed with a lighting pole, to light and extinguish outside lamps.

In Sugg's superheated "Littleton" lamp with distance control device we have a unit equal in convenience and superior in lighting value to anything the electricians can offer at the present time. My Company are supplying "Littleton" lamps on inclusive hire-maintenance terms, and fixing them free, with distance controllers. We have at present some 200 of these lamps out on hire, over 80 of which were fitted in 1925; and they are giving every satisfaction. In several instances we have been successful in displacing electric lamps, while in many cases shopkeepers have dispensed with electric lamps in their windows, after having outside gas lamps fitted. The 6-light "Littleton" lamp is listed to give 600 c.p., and, allowing for by-pass consumption, would account for 9000 B.Th.U. per hour, costing, at 10½d. per therm, 0·945d. To give equal duty, allowing 0·75 watt per candle-hour, electricity would have to be sold at 2·36d. per unit.

For public lighting, the medium superheated burner is a highly efficient unit, and when fitted in suitable lamps, properly spaced, will successfully defy competition. Good public lighting is without doubt an excellent advertisement; and it is good policy for gas undertakings, wherever possible, to fix, free of cost if necessary, sample lamps of the latest and most efficient types, particularly in main streets and at the junctions of important roads, in order to demonstrate to lighting authorities the service they are able to give. Where the electricity undertakings are in the hands of local authorities, it is, of course, the usual thing to adopt electricity for public lighting, irrespective of cost and relative efficiency. There are many

lamentable examples of costly and inadequate lighting as a result of this policy. Where the public lighting is in the hands of the gas undertaking, special care should be taken to ensure that the lamps are clean, and that the burners are giving their highest duty. A carefully kept maintenance record, combined with close supervision, is of great assistance in maintaining things up to the mark. The number of mantles used on each lamp should be recorded, and a periodical summary made, showing the comparative record of the lamps. Special attention can then be given to lamps that show a high mantle consumption. Where there are governors fitted, these should be regularly overhauled and tested two or three times a year, to ensure correct working. Each lamp should be cleaned at least once a week, and defective mantles and poor lights reported daily, and put in order without delay. Regularity in lighting-up and extinguishing is also important; and where automatic lighters are in use, special attention should be given to the accuracy of the controllers. Any that are working irregularly should be promptly removed for cleaning and re-adjustment. It is good practice to test the controllers for time-keeping before sending them out on the district.

Given good maintenance and keen supervision, there is not the slightest doubt that gas is the best and most economical agent for street lighting, as also for the outside illumination of business premises.

Referring again to the question of private maintenance, where there is a chargeable system in vogue, as a rule a very small proportion of the consumers can be induced to come regularly under the scheme; and it would appear necessary to adopt a system of maintenance giving labour, and charging only for mantles, burners, and accessories used, in order to give a comprehensive service to our lighting customers. My Company were running only an ordinary chargeable burner maintenance scheme, but in April last we started a general maintenance scheme. Under this scheme we send men from house to house, who overhaul all burners and apparatus, both for ordinary and slot consumers. The labour is free, and an order or the cash is obtained for any material supplied for consumers' own burners or appliances. This scheme will, I believe, be of great assistance to our consumers, many of whom do not trouble to advise the Company when they have a bad light, but buy a new mantle from a local tradesman, and put it on a dirty or defective burner. They effect no improvement in the light, and come to the conclusion that the Company are supplying them with bad gas. By sending trained men to help this type of consumer, the Company demonstrate that an excellent light can be given by gas, and in many cases prevent their becoming dissatisfied and turning over to electricity for lighting. We have so far only treated the scheme on experimental lines, but since last April have overhauled 6242 burners, and supplied 74 new burners and 30 new fittings. No fewer than 1476 installations have been overhauled, and the following apparatus attended to: 1338 cookers, 473 fires, 125 geysers, 162 coppers, 21 radiators, 196 boiling rings, and 196 miscellaneous appliances. The cost of the work, less cash received, comes out at 3s. 1½d. per consumer, but this includes material supplied on hired appliances, such as grill and drip tins, grill frets and new taps for cookers, new radiants for gas fires, and new burners for geysers. We intend to continue with the scheme; and additional youths will be shortly transferred from the fitting staff, to supplement those at present employed on the work.

The CHAIRMAN proposed a vote of thanks to Mr. Westbrook for his paper; and this was heartily accorded.

Midlands Circle.

The following is this year's programme of the Midlands Circle, which has been forwarded by the new Hon. Secretary, Mr. J. Tudor Rees, of Birmingham:

Programme, 1926.

Date.	Subject.	Introduced by.	Place of Meeting.
Feb. 18	Coke Sales	F. H. Arms (Birmingham)	Castle Bromwich
	Visit to British Industries Fair		
March 3	Town Gas for Steam Generation	J. N. Williams (Spencer Bonecourt, Ltd.)	Chamber of Commerce, Birmingham
April 7	Maintenance	T. B. Armitage (Cheltenham)	Cheltenham
May 5	Paper	E. L. Oughton (South Suburban)	Chamber of Commerce, Birmingham
June 2	Exhibitions	G. Burden (Redditch)	"
July 7	The Gas Industry's Contribution to National Welfare	R. J. Rogers (Birmingham)	Leicester
	Sales Organization	G. M. Lewis "	
Sept.	Visit to Smoke Abatement Exhibition	..	Birmingham
	B.C.G.A. Annual Conference	..	
Oct. 6	Tests for Efficiency	F. Caudwell (Shrewsbury)	Chamber of Commerce, Birmingham
Nov. 3	Electrical Competition	E. Canter (Leicester)	"
Dec. 1	What a Salesman should know of Sulphate and Bye-Products	W. A. Twine	"

New Domestic Coke Boiler.

The "Pilot."

The presence of an apparatus that ensures a continuous hot-water supply makes all the difference to the comfort of a household. As salesmen are aware, this fact is being more and more appreciated; and they will doubtless find of interest a new domestic coke boiler which has been brought out by Messrs. James Keith & Blackman Company, Ltd., of 27, Farringdon Avenue, E.C. 4.

The "Pilot," as this new boiler is called, is an independent unit specially designed for the average size house, villa, bungalow, or flat. It has a large hotplate, a visible or open fire, as desired, and a patent nickel-plated extending rail which serves three purposes: It protects the hands from being burned against the hotplate; it prevents pots, &c., being knocked off the hotplate; and, when pulled out in front of the fire, it provides facilities for drying glass cloths, &c.

The "Pilot" will give 35 gallons of hot water per hour at 150° Fahr., and 50 gallons at 120° Fahr. It provides three hot baths per hour at a temperature of 120° Fahr. The hotplate measures 20 in. deep by 14 in. wide, and the open fire is available for heating flat-irons, or for toasting; and when the firedoor is shut, the fire is visible through mica panels. As in the average household hot water is not required all the time for domestic purposes, the "Pilot" can also be utilized for serving a towel rail and one or two small radiators.

The new boiler is suitable for working on to a storage cylinder or tank up to 50 gallons capacity, and it is easily fixed and connected up. The firebox holds enough fuel to enable the boiler to work throughout the night without attention, when the damper is correctly adjusted, thus saving the time and trouble of making up a fresh fire in the morning.

The most suitable coke fuel for the "Pilot," state the makers, is "broken." The consumption naturally varies according to the demand made upon the boiler, but the average is about 1¼ cwt. per week.

The "Pilot" is constructed of cast iron, takes up little room, is of well-finished appearance, and embodies every device necessary to simplify regulation and reduce attention. Ample facilities are provided for periodically cleaning out lime deposits, and the interior is easily "get-at-able" by removing the large cleaning doors at each side of the boiler. A rocking firegrate is fitted which enables the fire to be cleaned out without opening the firedoor, thus preventing escape of dust into the kitchen. A damper for regulating the draught on the boiler is fitted in the smoke pipe, and there is a removable ash tray. Each part of the "Pilot" boiler is standardized, so that in the event of breakage, any part can be immediately replaced from stock. The flow and return connections, of 1½ in. diameter, are at the back.

The "Pilot" Coke Boiler.

Government Electricity Plans.

Referring to the above subject (which was dealt with in our editorial columns in the last number of the "SALESMAN"), Mr. L. L. Robinson, Engineer of the Hackney electricity undertaking, says: "A great deal too much emphasis is put by the Government on the cost of generation; and they have left out of account the cost of transforming, transmitting, distributing, sales, and service. If someone were to supply Hackney with electricity for nothing, it would not reduce the price ½d. per unit, for the big cost lies in the directions I have named. More important than cheap generation to Hackney is cheap sales, because if everyone used electricity exclusively for light, heat, power, and cooking, a supply could be provided without any alteration in technique at a flat-rate of 1d. per unit."

New "Bungalow" Cooker in Four Sizes.

Fig. 1.—Richmond's New "Bungalow" Cooker.

The introduction of new features into a gas cooker is always of interest to the gas salesman; and when that cooker is one such as Richmond's well-known "Bungalow," an added importance is imparted to the change. Readers will probably recall that in our issue for July of last year the first of Richmond's new "80" series of "Bungalows" was introduced. This cooker (fig. 1) has been on the market little over six months; but it has, by virtue of its many improvements, already practically displaced its parent (No. 52). The industry will now welcome the introduction of this cooker in four sizes; and to recall their advantages, we give a series of illustrations.

Fig. 2 shows the removable oven dome. Should any vaporized fat solidify beneath the oven top on its way to the flue outlet—and this is likely to happen in any cooker when too much heat is habitually used by the housewife—this fat may be instantly cleared by simply sliding-out the dome, and removing the obstruction. The necessity of having to dismantle the cooker, or even break the gas connection, is entirely avoided. A damper is fitted to the flue outlet, and this can be adjusted in accordance with the chimney pull in cases where a direct flue connection is made. Each boiling burner on the hotplate has a machined peg under the "head," and this fits into a machined hole in the interchangeable burner carriers. Burners are thus held rigid and firm. The grill is set well back, to allow of food being seen through the hotplate top without having to stoop to watch the progress of cooking.

Fig. 3, an interior view of part of the oven, shows the cast-iron gas supply bar. It will be seen that this is held rigidly to the front of the cooker. There is, therefore, no possibility of proper combustion being interfered with through the shifting of this bar. The perfect and permanent alignment of the burners with jets is ensured.

Fig. 4 emphasizes the new removable gate hanger which now contains extra shelf runners at most convenient distances apart. This provides a wider choice of positions, and is an attractive feature. The drip tin front completely fills the open space in front of the cooker base.

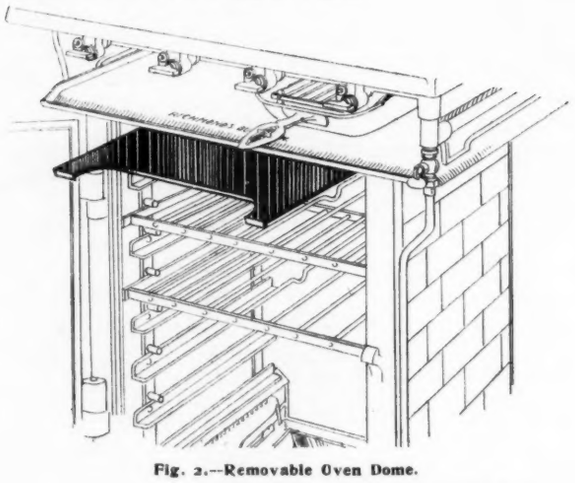


Fig. 2.—Removable Oven Dome.

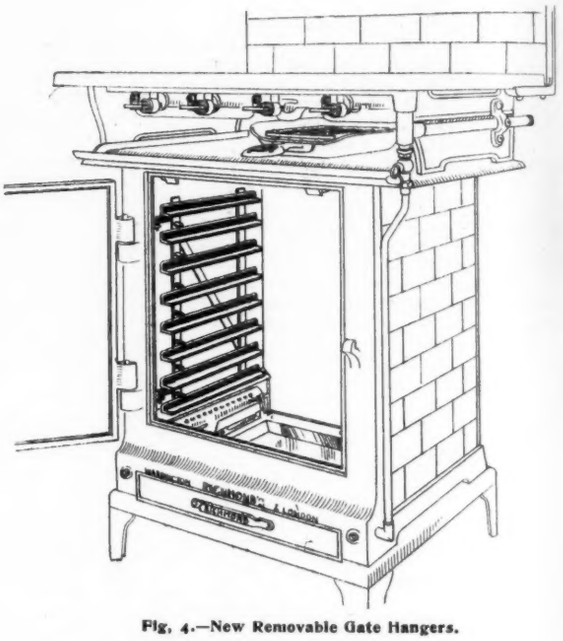


Fig. 4.—New Removable Gate Hangers.

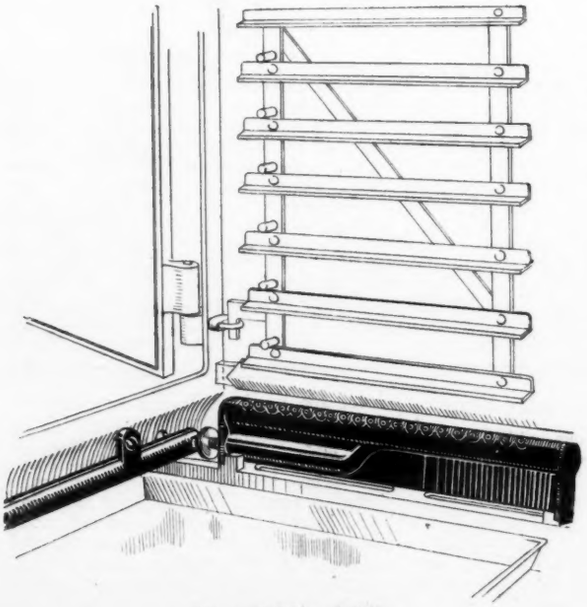


Fig. 3.—Interior of Oven.

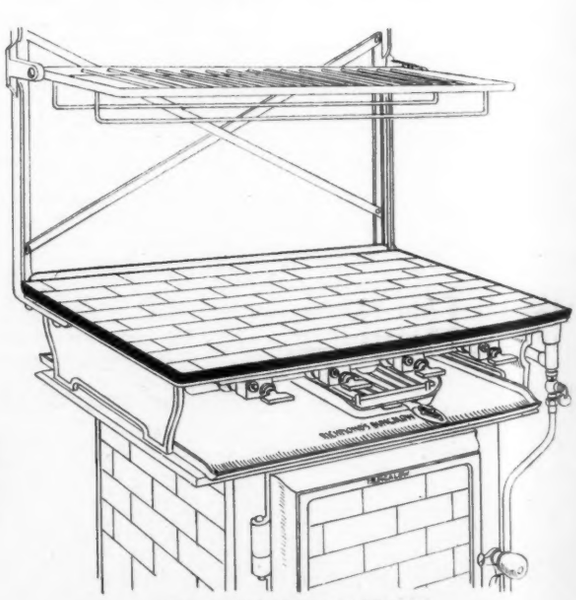


Fig. 6.—Plate-Rack and Wallplate.

The hotplate taps are of stout polished brass, and each is complete with gas and air adjuster. A special air sleeve is fitted in the shank of the grill burner, and this maintains the correct air supply without regard to the "rolling" of the burner when it is used for boiling. As can be seen from fig. 5, the gas bar is neatly hidden under the cornice. It is also of interest that the gas bar is tapped and plugged, so that a gas iron connection could at any time be fitted. This picture also shows the drop tap on the oven gas supply—a sensible safeguard against interference by young children.

Fig. 6 draws special attention to the plate-rack and wallplate. In addition to

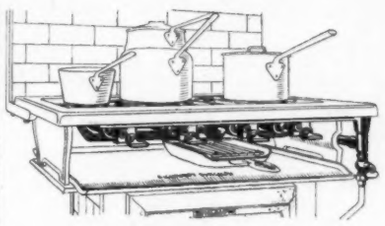


Fig. 5.—Hotplate Taps.

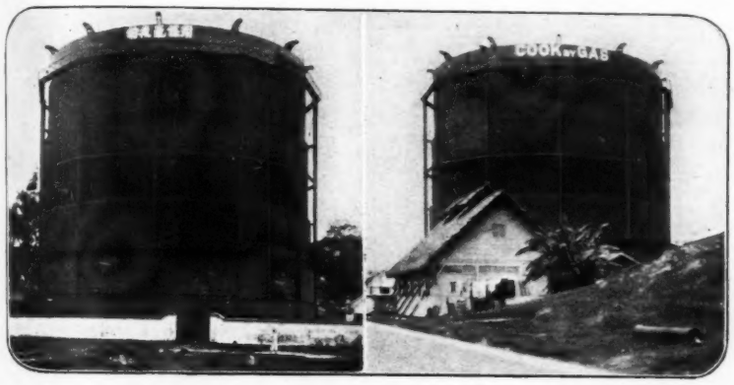
fulfilling its main purpose of protecting the wall from grease and steam, the white tiled wallplate may be lifted out and used as a pastry board or table top. It fits exactly on to the hotplate top, as shown. The plate-rack is fastened to the under surface of the cornice, leaving the hotplate top entirely clear, and free from obstruction. When the wallplate is in position, all the plate-rack supports are protected from steam and splashes.

The design of Richmond's "Bungalow" cooker has progressed steadily along sound and practical lines conforming to the revised ideas, styles, and conditions which changing times demand. In its new form and in its variety of sizes the "Bungalow" will continue to increase its wide popularity among salesmen and consumers alike.

Advertising Gas in the Far East.

From Mr. R. C. Taylor, B.Sc., Assistant Gas Engineer to the Municipality of Singapore, we have received two photographs, reproduced here, of the Kreta Ayer station holder. On one side of the holder is painted "Cook by Gas," and on the other side the same message is written in Chinese. The Singapore Gas Department, it is good to learn, are doing excellent business in cookers.

Street lighting in the district is carried out by Sugg's 6-light "Littleton" lamps.



"Fashion" and Opportunity.

By A. V. BISHOP.

Changes in fashion seriously affect the sales of many businesses; and tradesmen and salesmen, if they wish to anticipate the demands of the public, and keep up-to-date, have to watch carefully prevailing modes of attire, decoration, &c. At first sight it would not appear that changes in fashion would to any extent affect the gas salesman; yet a comparatively recent revolution has opened up great possibilities in at least one direction for an extension in the use of gas. I refer to the modern modes of dressing ladies' hair. Before the advent of the short-hair craze, the number of establishments devoted to the dressing of ladies' hair was comparatively small—the average hairdresser seldom catered for the fair sex. All this is changed. The new style has given the hairdressing business a tremendous fillip; and every barber of any pretensions at all has started a ladies' department. In many instances this has necessitated alterations and additions to existing premises.

This big increase in the hairdresser's business means that he requires more heat. He needs more hot water, and additional heating arrangements; and there is no doubt that he wants some convenient method of heating curling-irons. Here is the chance for the gas salesman. He should go to the barber, and inform him of all that gas can do to assist him in catering for the comfort of his clients, and in increasing the efficiency of his service.

The recommendation of water heaters, gas fires, and curling-iron heaters, and similar apparatus of common use, can safely be left to the initiative of the gas salesman, once the possibilities of the business are realized; but there are one or two types of apparatus not so well known. There is, for example, the gas-heated hair-drier—an appliance for which there ought to be a good demand. Then there is the towel drying and heating problem. It ought not to be difficult to persuade hairdressers to appreciate the advantages of the gas-heated towel-rail; but how often does one see this useful equipment in a hairdressing establishment? Of course, the hairdresser should not be allowed to instal electric light in his premises without a struggle. Here is a fine opportunity to stress the advantages of gas over electric light in the matter of eye-strain.

In connection with the short-hair mode, it ought also to be possible to extend the use of curling-iron heaters in private houses; for "bobbed" or "shingled" hair requires more careful and more frequent treatment than the old-fashioned "bun."

Hairdressing, however, is not the only business which at present offers scope for an extension in the use of gas as a result of a change in public practice. There is a growing tendency on the part of the public to resort to the aid of the dyer and cleaner in renovating and altering clothes. The number of establishments catering for this business has grown enormously during the past few years; and, moreover, continues to grow. Here again is an opportunity for gas undertakings to benefit. As a matter of fact, most cleaning establishments do use gas for their machines, though the apparatus is generally bought direct from the manufacturers, and not through gas undertakings. Nevertheless, it is well worth while keeping in touch with these people, to ensure that the maximum possible amount of business is being obtained for gas. It will often be found that the managers of these shops are amenable to the argument that gas light is better than electric light for showing-off colours.

These two examples show the necessity for the gas salesman to use his imagination, and to be on the alert to seize every advantage possible from changes in public taste and practice.

Increasing Goodwill by Making Payment Easy.

Recognizing that advantage should be taken of every opportunity to secure public goodwill, and that any practice which may prove a convenience to the consumer should be carefully considered, a Sub-Committee called attention, in a report presented to the annual convention of the American Gas Association, to a plan recently adopted by one of the gas companies which eliminates one source of unfavourable comment. It had been found that daily there were a number of people who arrived just too late to pay their bills; and then, of course, there are many persons whose times of employment make the gas company's office hours inconvenient to them.

It has therefore been arranged to have a locked box similar to a mail box installed at the entrance to the offices over the period during which the premises are closed. A framed glass sign over the box reads:

> For your convenience, you may pay your bill after the office is closed by following the instructions on the envelope.

At the bottom of the locked box is a receptacle containing a number of manilla envelopes, on which is printed:

> Place the exact amount of your bill in the envelope, together with the bill. Seal the envelope, and deposit it in the box. Receipt will be mailed you.

It is felt that each discount saved to the customer by this plan is a contribution to the fund of goodwill.

Three Essentials of Salesmanship.—In an address delivered at a sales conference of Tenney Service, Miss Elizabeth MacDonald said that three special requirements stand out for salesmen to keep in mind. The first of these is actual experience. Unless we have been through a thing ourselves, it fails to get "under our skin" sufficiently to make us sympathetic. The second is accuracy. For example, much harm has been done by overstating the capabilities of apparatus. The third is attention to the customer after the sale has been made. When the sale is complete, only the device has been sold in many cases. A larger market can be created by following-up all sales, and making sure that the appliance is being properly used and is thoroughly understood by the customer in her own home and in her own daily routine. A dissatisfied customer can build up a stockade of sales resistance in her neighbourhood which takes a lot of battering on the part of an enthusiastic salesman to knock down.

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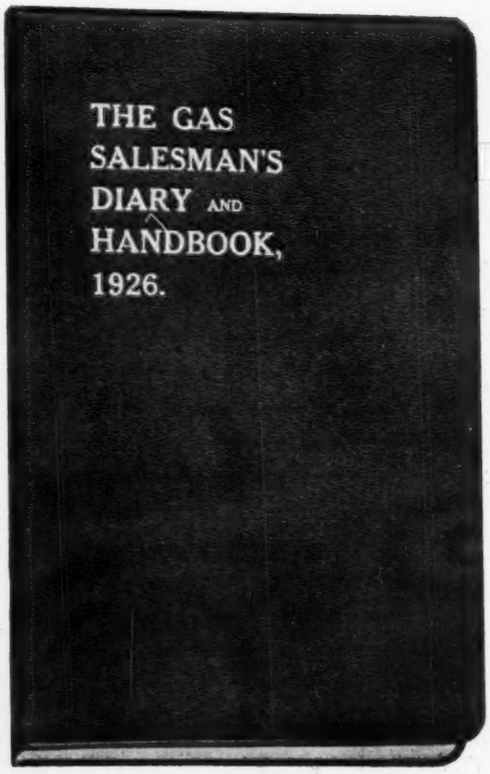

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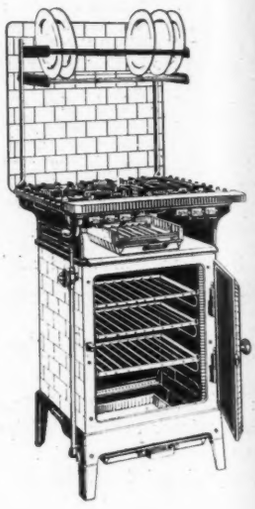

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